

Job Title: Coordination Chemist

Requisition Id 883

Overview: We are seeking a research chemist with a strong background in coordination chemistry to investigate and apply principles of molecular-recognition and supramolecular chemistry to problems in separations for energy applications. The successful candidate will focus on fundamental questions related to thermodynamics and solution structure as also applied to the recovery and recycle of critical materials, desalination, carbon capture, environmental remediation, recycle of used nuclear fuel, treatment of waste, and sensing of trace contaminants. You'll also be deeply involved in developing new and exciting ideas for proposals and participating in the planning and execution of experimental chemistry within the context of a multidisciplinary ecosystem including specialists in theory and computations, organic synthesis, separations, thermodynamics, spectroscopy, X-ray and neutron scattering, and materials characterization. This position resides in the Chemical Separations Group in the Chemical Sciences Division, Physical Sciences Directorate at Oak Ridge National Laboratory (ORNL).

Major Duties/Responsibilities:

- Work with a diverse team of scientists seeking to advance the scientific understanding of coordination and supramolecular chemistry to achieve chemical recognition by design and to put this understanding to use in real-world applications
- Perform experiments to elucidate the thermodynamic and structural basis of molecular recognition manifested in crystallization, solvent extraction, ion exchange, membranes, and other methods to meet fundamental and applied project goals
- Take responsibility for operation of a separations laboratory and associated equilibration devices and analytical instrumentation
- Independently formulate research problems and design research strategies, working with computational chemists and experimentalists to guide the design of new receptors and characterize their separation properties
- Develop and lead new research directions and contribute to research proposals to compete for internal and external funding
- Train group postdocs, students, and visiting scholars in thermodynamic, solution-structure, and separations methodologies developed in the group
- Present and report research results and publish scientific results in peer-reviewed journals in a timely manner
- Ensure compliance with environment, safety, health and quality program requirements
- Maintain strong dedication to the implementation and perpetuation of values and ethics

Basic Qualifications:

- A PhD in Chemistry or a closely related science discipline

Preferred Qualifications:

- A solid foundation in inorganic, physical, and analytical chemistry and in the principles of thermodynamics, solution structure, kinetics, and mechanism
- Expertise in coordination chemistry
- Experience in using at least one of the following techniques: solvent extraction, ion exchange, adsorption, membranes, or crystallization
- Working knowledge of basic instrumental techniques such as ICP-AES, ion chromatography, potentiometric titrimetry, and radiometric methods, as well as NMR, FTIR, and UV-vis spectroscopies
- Experience in X-ray spectroscopy (EXAFS), small-angle X-ray scattering (SAXS), or neutron scattering (SANS)
- Expertise in the chemistry of actinides, lanthanides, and fission products
- Excellent record of productive and creative research as demonstrated by publications in peer-reviewed journals
- Experience in proposal development and leading research projects
- Excellent written and oral communication skills and the ability to communicate to an international, scientific audience
- Motivated self-starter with the ability to work independently and to participate creatively in collaborative teams across the laboratory
- Ability to set priorities to accomplish multiple tasks within deadlines, and adapt to changing project needs

Special Requirement:

Please provide a list of publications when applying for this position. Three letters of reference are required and can be uploaded to your profile or emailed directly to PSDrecruit@ornl.gov. Please include the title of the position in the subject line.

Benefits at ORNL: UT-Battelle offers a quality benefits package, including a matching 401(k), contributory pension plan, paid vacation, and medical/dental plan options. Onsite amenities include a credit union, medical clinic, cafeteria, coffee stands, and fitness facilities.

Relocation: Moving can be overwhelming and expensive. UT-Battelle offers a generous relocation package to ease the transition process. Domestic and international relocation assistance is available for certain positions. If invited to interview, be sure to ask your Recruiter (Talent Acquisition Partner) for details. For more information about our benefits, working here, and living here, visit the "About" tab at jobs.ornl.gov.

This position will remain open for a minimum of 5 days after which it will close when a qualified candidate is identified and/or hired.

We accept Word (.doc, .docx), Adobe (unsecured .pdf), Rich Text Format (.rtf), and HTML (.htm, .html) up to 5MB in size. Resumes from third party vendors will not be accepted; these resumes will be deleted and the candidates submitted will not be considered for employment.

If you have trouble applying for a position, please email ORNLRecruiting@ornl.gov.

ORNL is an equal opportunity employer. All qualified applicants, including individuals with disabilities and protected veterans, are encouraged to apply. UT-Battelle is an E-Verify employer.